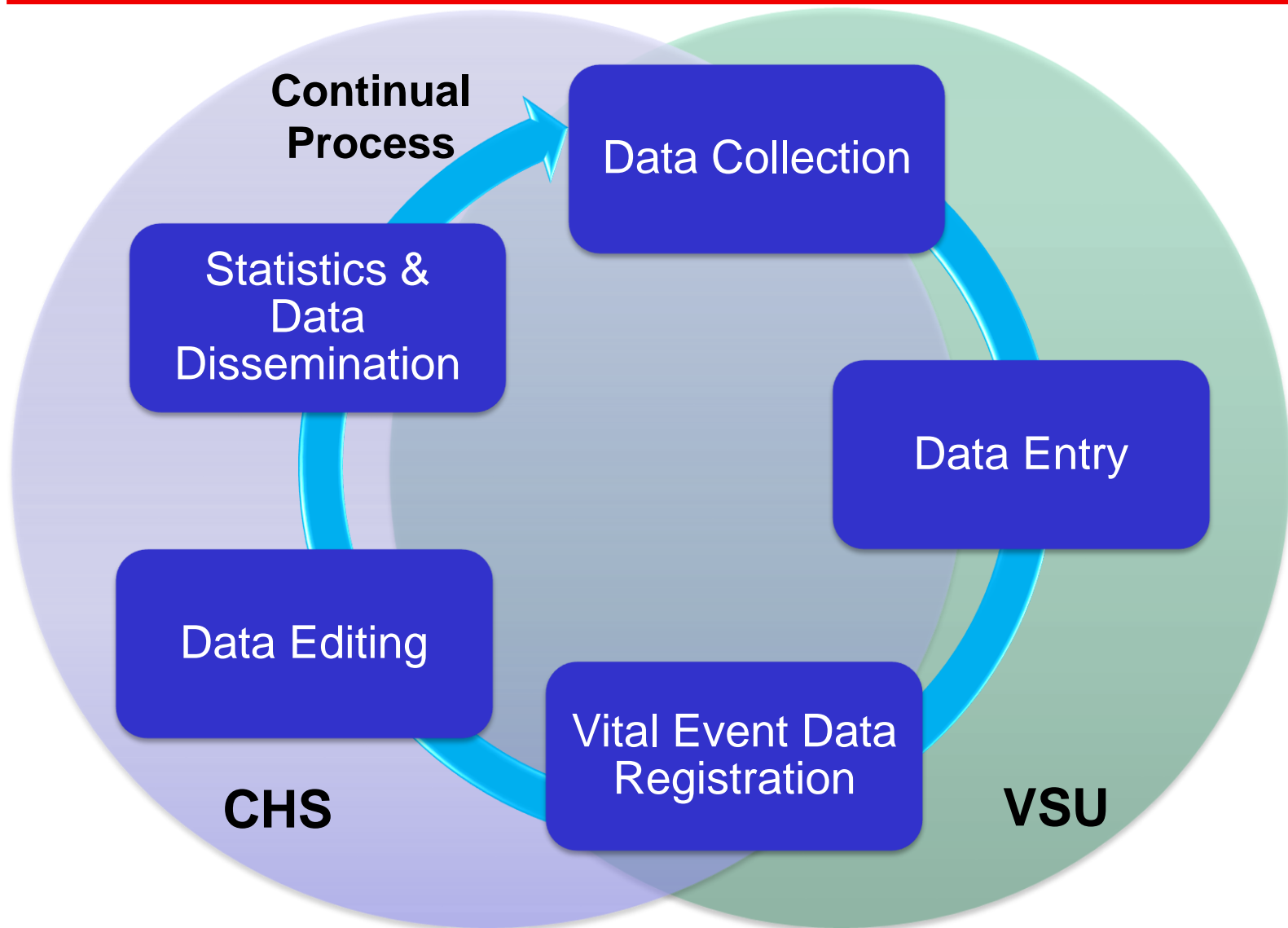# Death and Statistics
# The Afterlife of a Death Certificate

John Luke Irwin, MPH

Research Specialist, Center for Health Statistics

# Texas Vital Events Data and Statistics: A Collaborative Process

# After Registration

- Timeline of the Death Certificate
  - ICD-10 coding process
  - Data Editing and Finalization
- Common errors found during editing
  - Sex, age, unusual causes
- Why accuracy matters
  - What are these data used for?

# Timeline of the Death Certificate

- VSU Receives Certificate – Within **10 Days**

- Sends literal cause of death fields to NCHS to be placed into ICD-10 Codes by MICAR, ACME, and TRANSAX – **1-3 weeks**

- …

- **VSU -** Vital Statistics Unit
- **NCHS -** National Center for Health Statistics
- **ICD-10 -** International Classification of Diseases (Mortality), 10th Revision
- **MICAR -** Mortality Medical Indexing, Classification and Retrieval
- **ACME -** Automated Classification of Medical Entities
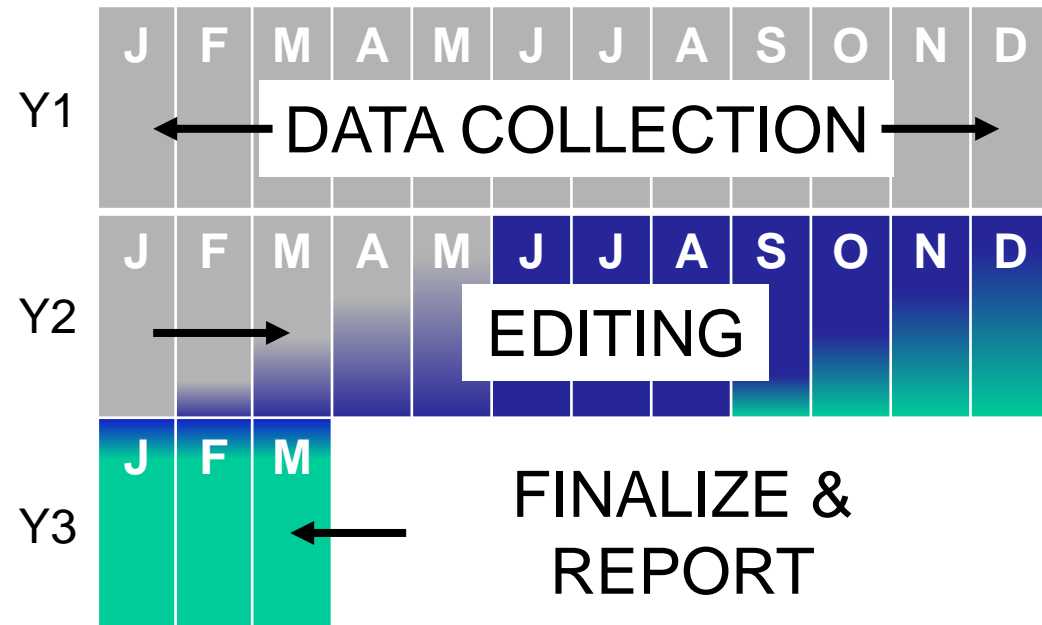- **TRANSAX -** TRANSlation of AXis

# Timeline of the Death Certificate

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- Data editing, checking, and finalization – **~8-10 months**

- **Total time - ~15 months** from year's end

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# Editing and Finalization (15 Months!?)

- Statistical cut-off date for data collection – **February through April**

- Finish editing and cleaning the data - **6-8 months**

- Creation of statistical files, Annual Report Tables, maps, and narratives - **several weeks**

- Publishing 100+ report items to the web - **several weeks**

| | J | F | M | A | M | J | J | A | S | O | N | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Y1** | | | | | | ← DATA COLLECTION → | | | | | | |

| | J | F | M | A | M | J | J | A | S | O | N | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Y2** | | | | → | | EDITING | | | | | | |

| | J | F | M |
|---|---|---|---|
| **Y3** | | | ← FINALIZE & REPORT |

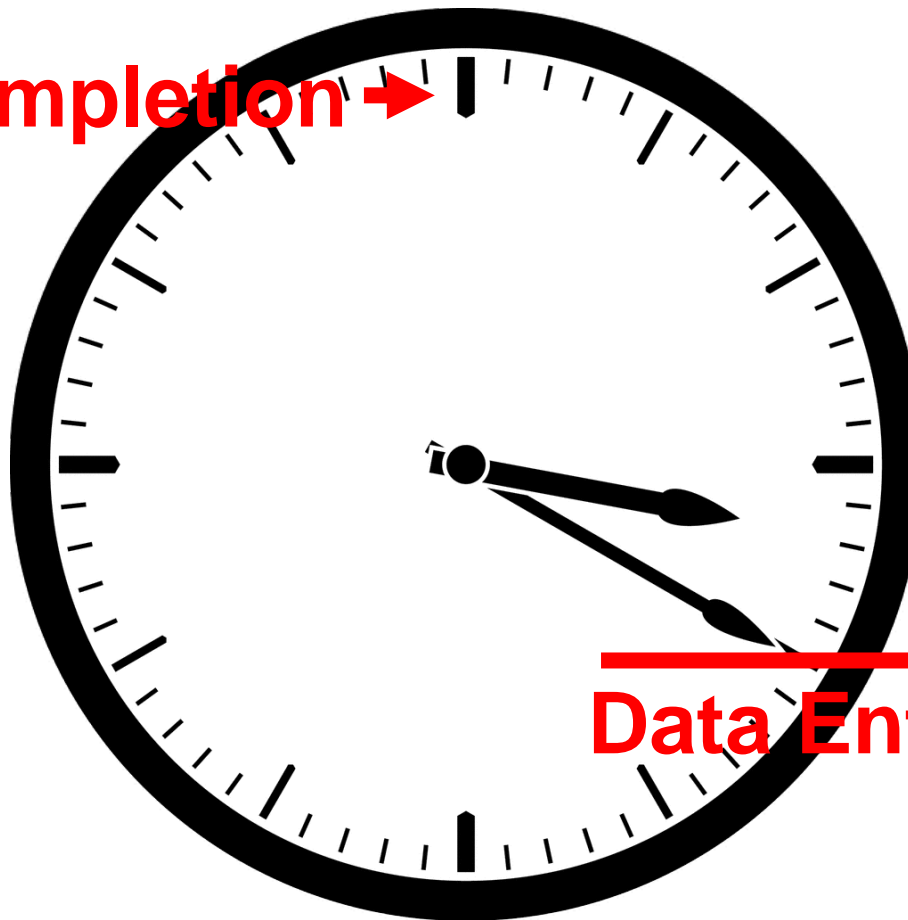**Registrars & VSU**   **CHS, VSU & IT**   **CHS**
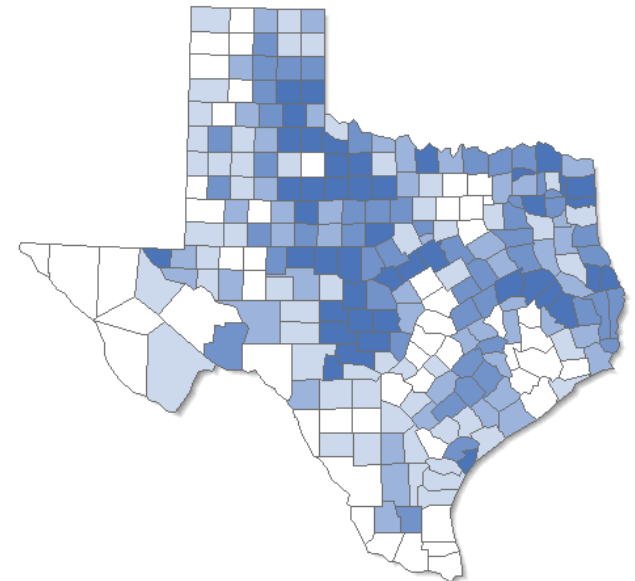
# Time to Data Completion

**Data Completion**

**Data Entry Errors**

# Common Errors - Demographic

- Missing dates of birth for identified decedents
- Date of birth is known but age is unknown
- Residence or Occurrence state/city/county is missing or blank when the decedent is identified

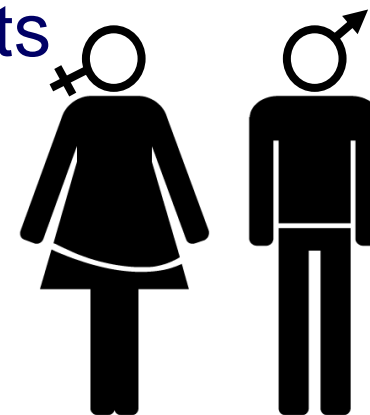| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
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# Common Errors – Age & CoD

- Age is not reasonable – esp. for infants
  - EITHER years OR months OR days
    - Not 33 days, not 15 months
  - EITHER hours OR minutes
    - Not 27 hours
- Age/Sex and Cause of Death (CoD) mismatches
  - Women with testicular or prostate cancer CoD
  - Males with uterine/ovarian cancer or pregnancy related CoD
  - Infants with suicide or pregnancy related CoD

# Common Errors - CoD

- "If Injury" field does not correspond with other injury fields
  - Decedent died of injury, but location of injury fields blank

- Inappropriate characters in cause of death fields
  - # @ ) ; etc.

- Missing appropriate cause(s) of death
  - "Pending" results acceptable
  - "Wheelchair"

- ...h other

- ...ury fields

- ...eath

# Common Errors – Race/Ethnicity

- Mismatches in Race/Origin fields
  - "Not Hispanic Origin" selected along with "Other: Hispanic"
  - "Race: Unknown" selected with specific race fields also selected

# Timely Data

- Timely reporting
  - More time for checking data
  - Increases action-ability of the data
  - Allows for more public health surveillance
- For registrars –
  - Improve accuracy & reduce data errors
  - Speedily process amendments
- For CHS
  - Quarterly edits & perform edits faster
  - TxEVER

# Data Uses, or,
# Why Does This Matter?

- Medical and health-related research
  - Larger proportion of cancer or heart related deaths in certain areas?
  - Multiple fields used for meaningful information
- Development of targeted public health services/interventions
  - Age group
  - Races
  - Gender
- Determine the impact of intervention efforts
- Insurance benefits and claims for the family

# Data Uses – Public Health

- Research
  - Academic publications and reports
  - Answers general programmatic questions
  - Grant proposals and funding
- Media publications
- Legal and Legislative
  - Policy and Practice
- Tracking ancestry and genetics

# Final Thoughts

You are a **major** Part of the Process

All death certificate fields are important (especially literal ones)

It can take months before a mistake is flagged

You are one of the only people who can collect and provide *correct* information

You are the only ones who can process amendments quickly

Remember, YOU impact history and the future!

Vital Statistics does not exist without YOU!

So thank YOU for all YOU do!!

Thank You

Rememb                          he future!
Vital S                          YOU!
S                                !

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